

PCTAIRE-1 (H-70): sc-22775

BACKGROUND

Cell cycle progression is controlled in part by a family of cyclin proteins and cyclin dependent kinases (Cdks). Cdk proteins work in concert with cyclins to phosphorylate key substrates involved in cell cycle progression. Another family of proteins, Cdk inhibitors, also play a role in regulating the cell cycle by binding to cyclin-Cdk complexes and modulating their activity. Members of the Cdk family include Cdk2–Cdk8, PCTAIRE-1–3, PITALRE and PITSLRE. PCTAIRE-1, PCTAIRE-2 and PCTAIRE-3 comprise a subfamily of cdc2-related serine/threonine kinases. PCTAIRE-1, which is expressed primarily in mammalian brain, interacts with a variety of proteins, and is thought to be part of a multiple signal transduction cascade. PCTAIRE-2, also with expression in brain, may be important in terminally differentiated neurons. The human PCTAIRE-3 gene maps to chromosome 1q31-q32.

REFERENCES

- Okuda, T., et al. 1992. PCTAIRE-1 and PCTAIRE-3, two members of a novel cdc2/CDC28-related protein kinase gene family. *Oncogene* 7: 2249-2258.
- Okuda, T., et al. 1994. Cloning of genomic loci and chromosomal localization of the human PCTAIRE-1 and -3 protein kinase genes. *Genomics* 21: 217-221.
- Pines, J. 1994. The cell cycle kinases. *Sem. Cancer Biol.* 5: 305-313.
- MacLachlan, T.K., et al. 1995. Cyclins, cyclin-dependent kinases and cdk inhibitors: implications in cell cycle control and cancer. *Crit. Rev. Euk. Gene Expr.* 5: 127-156.
- Siebert, R., et al. 1996. Role of the cyclin-dependent kinase 4 and 6 inhibitor gene family p15, p16, p18 and p19 in leukemia and lymphoma. *Leukemia and Lymphoma* 23: 505-520.
- Dirks, P.B., et al. 1997. Current concepts in neuro-oncology: the cell cycle—a review. *Neurosurgery* 40: 1000-1013.
- Sladeczek, F., et al. 1997. The Cdk-like protein PCTAIRE-1 from mouse brain associated with p11 and 14-3-3 proteins. *Mol. Gen. Genet.* 254: 571-577.

CHROMOSOMAL LOCATION

Genetic locus: CDK16 (human) mapping to Xp11.23; Cdk16 (mouse) mapping to X A1.3.

SOURCE

PCTAIRE-1 (H-70) is a rabbit polyclonal antibody raised against amino acids 1-70 mapping at the N-terminus of PCTAIRE-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

PCTAIRE-1 (H-70) is recommended for detection of PCTAIRE-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PCTAIRE-1 (H-70) is also recommended for detection of PCTAIRE-1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for PCTAIRE-1 siRNA (h): sc-37584, PCTAIRE-1 siRNA (m): sc-37585, PCTAIRE-1 shRNA Plasmid (h): sc-37584-SH, PCTAIRE-1 shRNA Plasmid (m): sc-37585-SH, PCTAIRE-1 shRNA (h) Lentiviral Particles: sc-37584-V and PCTAIRE-1 shRNA (m) Lentiviral Particles: sc-37585-V.

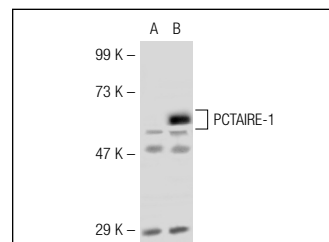
Molecular Weight of PCTAIRE-1: 54 kDa.

Positive Controls: PCTAIRE-1 (m): 293T Lysate: sc-122442, PCTAIRE-1 (m2): 293T Lysate: sc-122443 or MCF7 whole cell lysate: sc-2206.

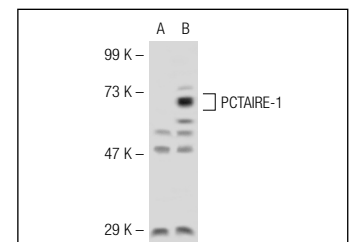
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PCTAIRE-1 (H-70): sc-22775. Western blot analysis of PCTAIRE-1 expression in non-transfected: sc-117752 (A) and mouse PCTAIRE-1 transfected: sc-122442 (B) 293T whole cell lysates.



PCTAIRE-1 (H-70): sc-22775. Western blot analysis of PCTAIRE-1 expression in non-transfected: sc-117752 (A) and mouse PCTAIRE-1 transfected: sc-122443 (B) 293T whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.